

Parameter	S1:SS, S2:SS, S3:SS, IS1:SS, IS2:SS
STAGE 1	STAGE 1
stage length [m]	31.2
dry mass [kg]	7920
filled propellant [kg]	95289
unuseable propellant [kg]	912
vacuum lsp [s]	322
vacuum thrust [kN]	1547
sea level thrust at takeoff [kN]	1365
engine nozzle exit area [m^2]	1.80
wall thickness [mm]	1.67
sigma [-]	0.0340
tank pressure [bara]	7.0
interstage mass [kg]	699
interstage thickness [mm]	3.6
STAGE 2	STAGE 2
stage length [m]	6.3
dry mass [kg]	1768
filled propellant [kg]	9298
unuseable propellant [kg]	65
vacuum lsp [s]	349
vacuum thrust [kN]	97
engine nozzle exit area [m^2]	1.09
wall thickness [mm]	1.67
sigma [-]	0.0773
tank pressure [bara]	7.0
interstage mass [kg]	227
interstage thickness [mm]	2.0
STAGE 3	STAGE 3
stage length [m]	1.7
fairing length [m]	4.3
dry mass [kg]	327
filled propellant [kg]	480
unusable propellant [kg]	8
vacuum lsp [s]	305
vacuum thrust [kN]	1.6
engine nozzle exit area [m^2]	0.067
aspect ratio whole rocket [-]	19.4
payload mass [kg]	1790.05